

~~2~~ 2. The stabilized platform of Claim 37, wherein the control system compensates for errors in the first sensor package using information obtained from the second sensor package.

3. The stabilized platform of Claim 37, wherein the second sensor package includes two level sensors for sensing a position of the payload platform in two perpendicular directions.

4. The stabilized platform of Claim 37, wherein the first sensor package is fixed with respect to the base.

5. The stabilized platform of Claim 21, wherein the second sensor package is mounted on the payload platform.

6. The stabilized platform of Claim 37, further comprising a camera mounted on a payload platform.

7. The stabilized platform of Claim 37, further comprising at least one of a chair and a table mounted on the payload platform.

~~10~~ 10. The stabilized platform of Claim 37, wherein the means for moving the payload platform comprises three motors for rotating the payload platform about three perpendicular axes of rotation.

11. The stabilized platform of Claim 10, wherein the first sensor package includes sensors for determining rate of rotation about three perpendicular axes.

12. The stabilized platform of Claim 37, wherein the control system allows a user to set an initial payload platform position and provides self correction of the platform to the initial position.

13. The stabilized platform of Claim 37, wherein a universal camera mount is mounted on the payload platform and a camera is mounted on the camera mount, the camera mount allowing hands on control of the camera by a camera operator and stabilization of the camera with the stabilized platform.

14. A method of stabilizing and self correcting a camera platform comprising:  
positioning a stabilized camera platform on a moving object;  
stabilizing the payload platform in at least two dimensions based on information collected by a first sensor package sensing motion of the moving object independent of motion of the payload platform;  
sensing by a second sensor package a position of the payload platform relative to a predetermined position; and  
self correcting the position of the payload platform to the predetermined position based on information collected by a second sensor package.

15. The method of Claim 38, wherein the information collected by the second sensor package is collected by a plurality of level sensors.

16. The method of Claim 38, wherein the stabilized platform is self corrected in two dimensions.

17. The method of Claim 38 further comprising controlling a camera mounted on the platform by hands on operator control.

Please add new claims 21-45 as follows:

21. A stabilized platform comprising:  
a payload platform for supporting an article to be stabilized;

a base;

a stabilizing system connected between the payload platform and the base, the stabilizing system including means for moving the payload platform with respect to the base about two different axes for providing the payload platform with stabilization in two dimensions;

a first sensor package for determining, in two transverse directions, motion of a moving object on which the stabilized platform is mounted;

a second sensor package comprising sensor means for sensing a position of the payload platform and for providing information based on the position of the payload platform relative to a predetermined position; and

a control system connected to the means for moving for stabilizing the platform in response to information provided by the first sensor package and the second sensor package.

22. The stabilized platform of Claim 37, wherein the information provided by the first sensor package is independent of the stabilization of the payload platform provided by the means for moving, and the information provided by the second set of sensors is dependent upon the stabilization of the payload platform.

23. The stabilized platform of Claim 37, wherein the second sensor means comprises at least two level sensors for sensing differences in level about at least two transverse axes relative to the predetermined position.

24. The stabilized platform of Claim 21, wherein the control system responds to information from the first sensor package more often than the control system responds to information from the second sensor package.

25. The stabilized platform of Claim 21, wherein the information provided by the first set of sensors results in drift over time of the position of the payload platform from the predetermined position, and the means for moving, in response to information provided by the second set of sensors to the control system, corrects the drift and moves the platform back to the predetermined position.

26. The stabilized platform of Claim 37, wherein the first sensor package comprises sensors for sensing a different type of information from the sensor means in the second sensor package.

27. The stabilized platform of Claim 21, wherein the control system responds to information from the first sensor package at a rate of at least as fast as about one hundred times per second and the control system responds to information from the second sensor package at a rate of about once per second to about once per minute.

28. The method of Claim 14, wherein the position of the platform is subject to drift over time from stabilization of the platform in response to the first sensor package, and the step of self correcting based on information provided by the second sensor package corrects for the drift.

29. The method of Claim 14, wherein the step of stabilizing based on the information provided by the first sensor package comprises sensing motion of the moving object independent of the motion of the platform, and the step of self correcting based on the information provided by the second sensor package, comprises a step of sensing the position of the platform.

30. The method of Claim 14, wherein the step of stabilizing is performed by moving the platform in response to information provided by the first sensor package, and the step of

self correcting is performed by moving the platform in response to the information provided by the second sensor package, and the step of stabilizing is performed more often than the step of self correcting.

31. The method of Claim 30, wherein the step of stabilizing in response to information provided by the first package is at a rate of at least as fast as about one hundred times per second, and the step of self correcting is in response to information provided by the second sensor package at a rate of about once per second to about once per minute.

32. The method of Claim 14, wherein the step of stabilizing results in drift of the position of the platform relative to the predetermined position, and in the step of self correcting, the drift is corrected by sensing the position of the platform.

33. The method of Claim 15, wherein in the step of stabilizing, the first sensor package comprises two rate sensors for sensing a rate of motion of the moving object.

34. A stabilized platform comprising:  
a payload platform for supporting an article to be stabilized;  
a base;  
a stabilizing system connected between the payload platform and the base, the stabilizing system including means for moving the payload platform with respect to the base about two different axes for providing the payload platform with stabilization in two dimensions;  
a first sensor package for determining, in two transverse directions, motion of a moving object on which the stabilized platform is mounted;

10 a second sensor package comprising sensor means fixed to the payload platform  
for providing information based on a position of the payload platform relative to a  
12 predetermined position; and

a control system connected to the means for moving for stabilizing the platform  
14 in response to information provided by the first sensor package and the second sensor package,  
wherein the information provided by the first sensor package is independent of the stabilization  
16 of the platform provided by the means for moving, and the position of the platform is subject  
to drift over time from stabilization thereof based on information provided by the first sensor  
18 package, and wherein the control system responds to information provided by the second  
sensor package to correct for the drift from the predetermined position, and the first sensor  
20 package comprises rate of motion sensors and the sensor means comprises level sensors.

35. A stabilized platform comprising:

2 a payload platform for supporting an article to be stabilized;

a base;

4 a stabilizing system connecting the payload platform to the base, the stabilizing  
system including at least two motors for rotating the payload platform with respect to the base  
6 about two perpendicular axes of rotation providing the payload platform with stabilization in  
two dimensions;

8 a first sensor package fixed to said base for determining motion of a vehicle on  
which the stabilized platform is mounted in two perpendicular directions,

10 a second sensor package including at least one level sensor fixed to the payload  
platform; and

12 a control system for continuously stabilizing the platform based on information  
provided by the first sensor package and correcting for first sensor package anomalies based on  
14 information provided periodically by the second sensor package.

36. A method of stabilizing and self correcting a camera platform comprising:  
2 positioning a stabilized camera platform on a moving vehicle;  
continuously stabilizing the platform in at least two dimensions based on  
4 information collected by a first sensor package fixed relative to the moving vehicle and sensing  
motion of the moving vehicle; and  
6 periodically self correcting a position of the platform based on information  
collected by a second sensor package including a level sensor and mounted on the platform.

37. The stabilized platform of Claim 21, wherein the second sensor package is fixed  
2 to the payload platform.

38. The method of Claim 14, wherein there is a step of fixing the second sensor  
2 package to the payload platform prior to the step of sensing with the second sensor package.

39. The stabilized platform of Claim 37, wherein the control system responds to  
2 information from the first sensor package more often than the control system responds to  
information from the second sensor package.

40. The stabilized platform of Claim 37, wherein the information provided by the  
2 first set of sensors results in drift over time of the position of the payload platform from the  
predetermined position, and the means for moving, in response to information provided by the  
4 second set of sensors to the control system, corrects the drift and moves the platform back to  
the predetermined position.

41. The stabilized platform of Claim 37, wherein the control system responds to  
2 information from the first sensor package at a rate of at least as fast as about one hundred times  
per second and the control system responds to information from the second sensor package at a  
4 rate of about once per second to about once per minute.

42. The method of Claim 38, wherein the position of the platform is subject to drift  
2 over time from stabilization of the platform in response to the first sensor package, and the step  
of self correcting based on information provided by the second sensor package corrects for the  
4 drift.

43. The method of Claim 38, wherein the step of stabilizing based on the  
2 information provided by the first sensor package comprises sensing motion of the moving  
object independent of the motion of the platform, and the step of self correcting based on the  
4 information provided by the second sensor package, comprises a step of sensing the position of  
the platform.

44. The method of Claim 38, wherein the step of stabilizing is performed by moving  
2 the platform in response to information provided by the first sensor package, and the step of  
self correcting is performed by moving the platform in response to the information provided by  
4 the second sensor package, and the step of stabilizing is performed more often than the step of  
self correcting.

45. The method of Claim 38, wherein the step of stabilizing results in drift of the  
2 position of the platform relative to the predetermined position, and in the step of self  
correcting, the drift is corrected by sensing the position of the platform.

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